

(19)



JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

(11) Publication number: 04159480 A

(43) Date of publication of application: 02.06.92

(51) Int. Cl

F04C 18/16  
F04C 29/02

(21) Application number: 02278029

(22) Date of filing: 18.10.80

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(54) SCREW COMPRESSOR

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(57) Abstract:

PURPOSE: To always stabilize supply or circulation of oil to a bearing even without using an oil pump by providing a through hole in one or both shaft center parts or in the vicinity thereof in a screw rotor, and connecting bearing chambers.

CONSTITUTION: Oil from an oil reservoir 15, passing through an oil path 23, is supplied to a delivery side bearing part, to serve as a seal for gas leakage from a delivery side tooth end surface 24 of a rotor 8 and also lubricating a roll bearing 6 and a ball bearing 7, and guided to a bearing chamber 19. Here, a through hole 16, connected to a suction side bearing chamber 20 from the delivery side bearing chamber 19, is provided in a rotor shaft center part, in the rotor 8. A spiral groove 18 is formed in an internal wall part of the through hole 16. Oil is guided from the delivery side bearing chamber 19 to the suction side bearing chamber 20 by viscous pump action of the spiral groove 18 in the internal wall part of the through hole 16. In this way, stable supply of oil is ensured relating to also a fluctuation of pressure in space with no oil pump required.

